### Overbay, Michael

From: Overbay, Michael

Sent: Wednesday, August 07, 2013 3:51 PM
To: Dwyer, Stacey; Dellinger, Philip; Graves, Brian

Cc: Frazier, Mike

Subject: RE: Notes from today's Bayou Corne Science Workgroup

No, not beyond that the 3D seismic interpretation report is due at the end of the month. I see no discussion of "a plan for moving forward," on these calls. They are just updates. Mike is scheduled to go to LDNR next month and possibly to Bayou Corne as part of his end of year. Seems like a perfect opportunity to press them on how to proceed. We can note to LDNR that General Honoreh is pressing EPA to "take over," which we do not generally want to do, but that we have to be able to explain to DC what the plan is and what type of timetable they are working on.

## Michael Overbay, P.G.

Regional Groundwater Center Coordinator US Environmental Protection Agency, Region 6 (214)665-6482

From: Dwyer, Stacey

Sent: Wednesday, August 07, 2013 3:11 PM

To: Overbay, Michael; Dellinger, Philip; Graves, Brian

Cc: Frazier, Mike

Subject: Re: Notes from today's Bayou Corne Science Workgroup

#### Did they discuss next steps?

From: Overbay, Michael

**Sent:** Wednesday, August 07, 2013 3:04:04 PM **To:** Dwyer, Stacey; Dellinger, Philip; Graves, Brian

Cc: Frazier, Mike

Subject: Notes from today's Bayou Corne Science Workgroup

Mike and I sat in on the call. Now they do not know how deep the sinkhole is. John Boudreaux could not tag bottom with a 750 foot weighted tape measure, while contractors have recently tagged it at 300 and 400 feet. They think debris is what the contractors are touching. They also do not know where the top of the fill material is in the cavern. Their numbers are all over the place.

# Michael Overbay, P.G.

Regional Groundwater Center Coordinator US Environmental Protection Agency, Region 6 (214)665-6482

From: Thomas Van Biersel [mailto:Thomas.VanBiersel@LA.GOV]

Sent: Wednesday, August 07, 2013 11:40 AM

**To:** 'boyce.clark@arcadis-us.com'; 'bobby.mcdonald@sug.com'; Brent Campbell; 'bill.goodman@respec.com'; 'Dayton.j.pannell@uscg.mil'; 'dgodda1@lsu.edu'; Gary Ross; Gary Snellgrove; 'garcement@usgs.gov'; Jake Causey; 'gljeff@lsu.edu'; Jim Welsh; 'joe@ratiganeandc.com'; 'jwarneke@texasbrine.com'; Johan Forsman; 'hammer@lsu.edu'; 'jlovelac@usgs.gov'; Laurence Bland; 'thibod@lsu.edu'; 'agpul@lsu.edu'; 'michael.leblanc@crosstexenergy.com'; Patrick

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**Cc:** Brenda Miranda; Mollie Montelaro; Dana Naquin **Subject:** RE: RE: Bayou Corne Science Workgroup

Below is today's agenda. If you have any items you wish to add to the agenda send them to me before the meeting. Please call in promptly at 2:00 p.m. to beginning the discussion at approximately 2:05 p.m CDT. For those of you near DNR (LaSalle Building) the call will initiate from the 12<sup>th</sup> floor conference room, if you wish to participate in person.

Call login info:

1. Choose one of the following numbers to dial:

If you are calling from an office location with on-site number(s) (listed below), try this number first. If you do not have on-site access, or you are not a member of the host's company/organization, use one of the other numbers shown.

- \* Toll-Free Number (in USA): 866-434-5269.
- \* Caller-Paid number: 216-706-7005
- \* Blackberry (Toll-Free Number): 866-434-5269x2839833#
- 2. When prompted, enter the Meeting Access Code: 2839833#

#### **MEETING AGENDA 8/7/13 – 2:00 p.m. (CST)**

#### 1. Current Status/Updates

- a. Bubbling Locations/Intensity Changes (CBI) *Brad with CBI* On June 11, John Boudreaux identified an additional 5 bubbling sites. On June 12 CBI initiated monitoring on all sites. 76% of 84 bubble locations have continued bubbling, 14% have stopped, the rest are dry.
- b. Sink Hole Changes (TBC and CBI) *Brad with CBI* July 12 survey showed 191 foot max depth with 140 average. However, later in July, John Boudreaux tested with a tape and could not touch bottom with a 750' tape. Last week tags of bottom went 300' and 400'. It is not clear what is happening. The sink hole continues to grow, and has increased in size by 300,000 cubic feet in the last month. It is now 23 acres in size. It may be likely the sonar is reflecting the trees and debris rather than below.
- c. Observed Seismic Activity (TBC, CERI and Steve Horton) *Steve Horton, University of Memphis*-- Two types of events are happening here, MEQs are sharp but small movements associated with some type of fault slip. The very long pulse (VLP) events are related to some type of gas

- or fluid movement. MEQ activities are currently in a low rate period. The VLPs are not too variable in their rates in general, but July 19-21 the rate increased.
- d. Aquifer Relief/Vent Wells, Monitoring Wells, Geophone wells and Geoprobes (CBI and TBC) *Brad at CBI* 12 of the 37 wells are flaring at 37 MCF per day combined. Conducting a CPT investigation with 72 borings installed by August 5<sup>th</sup> to identify the extent of gas. TXB is doing testing to find effective gas removal techniques. 17 of 18 monitoring wells show no gas pressure. Detections of organics in an industrial water supply well at OXY 2 are increasing. Benzene first detected there in Feb. but now exceeding the MCL.
- e. Testing/Data Collection on OXY #3 Cavern (TBC) *Brad at CBI* June 28 a cavern fill material sample was 54% quartz, 20% clay, 7% halite, the rest other minerals. The interface between the brine and the sludge is about 60 from the top of the cavern. However, the tool that has been used to check the top of the fill physically is probably sinking into the sludge a variable amount every time and they do not really know where a "solid" material exists.
- f. Testing/Data Collection on OXY #1 Cavern (TBC) Brad at CBI No new information
- g. Subslab monitoring (CBI and TBC) *Brad at CBI* 15 residences have subslab monitoring devices. Some homeowners are reluctant to allow installation of ventilation systems.
- h. Subsidence monitoring (CBI and TBC) Brad No dew data.

#### 2. Other issues

- a. 3D Seismic results -- *Marlin* Just received a 2007 3D data set last week. Doing processing/reprocessing of the data and reviewing results. Increasing the resolution of the images and seeing a lot of details about possible gas accumulations as deep as 1,600 feet (but that may have been there in 2007 and unrelated to this event). A report should be available by the end of the month.
- b. Geophone 1 Geophysical Logging (TBC) *Brad with CBI* Nothing that seemed important to me.
  - c. Next call will be 9/4/13 @ 2:00 pm

#### 3. Adjourn

Thomas

Thomas P. Van Biersel, Ph.D., P.G. Hydrologist Office of the Secretary Louisiana Department of Natural Resources (225) 342-1813